

CLAIMS

I claim:

1. A tree shelter (1) comprising a biodegradable fibrous mat (2) covered with a degradable resin (5) and adapted to be formed into a roll which can enclose at least the lower part of a plant.
2. A tree shelter (1) as claimed in Claim 1, wherein the fibrous mat (2) comprises a woven mat.
3. A tree shelter (1) as claimed in Claim 1, wherein the fibrous mat (2) is non-woven and comprises a plurality of layers of fibres.
4. A tree shelter (1) as claimed in Claim 3, wherein the degradable resin (5) comprises an exterior coating over each of the side surfaces of the fibrous mat (2).
5. A tree shelter (1) as claimed in Claim 4, wherein the structure of the fibrous mat (2) is impregnated with a second degradable resin (4) which degrades at a different rate to that of the first degradable resin (5) under the same environmental conditions.
6. A tree shelter (1) as claimed in Claim 5, wherein the second resin (4) encapsulates the fibres of the mat (2).
7. A tree shelter (1) as claimed in Claim 5 or Claim 6, wherein the rate of degradation of the first resin (5) is longer than the rate of degradation of the second resin (4).
8. A tree shelter (1) as claimed in any of Claims 5 to 7, wherein the first and second resins (4,5) are both biodegradable.
9. A tree shelter (1) as claimed in any of Claims 3 to 8, wherein the layers of fibres in the mat (2) are cross- linked.

10. A tree shelter (1) as claimed in any of Claims 1 to 9, wherein the mat (2) is substantially made from at least one of or a mixture of flax fibres, hemp, mineralized straw and treated grass waste.

11. A tree shelter (1) as claimed in any of Claims 1 to 10, wherein the shelter (1) comprises a laminate structure made from two outer sheets of the first degradable resin (5) which are bonded to and enclose the fibrous mat (2).

12. A tree shelter (1) as claimed in any of Claims 1 to 11, wherein at least one of the degradable resins (4,5) substantially comprises polyvinyl alcohol.

13. A tree shelter (1) as claimed in Claim 12, wherein said at least one resin (4,5) is a mixture comprising between 20% and 95% polyvinyl alcohol, up to 70% calcium carbonate and between 5% and 30% propanetriol.

14. A tree shelter (1) as claimed in any of Claims 1 to 11, wherein at least one of the degradable resins (4,5) substantially comprises a copolyester resin made from poly (tetramethylene adipate-co-terephthalate).

15. A tree shelter (1) as claimed in any of Claims 1 to 14, wherein at least one of the degradable resins (5) substantially comprises a cashew nut shell resin.

16. A tree shelter (1) as claimed in any of Claims 5 to 8, wherein the first degradable resin (5) comprising an exterior coating over the side surfaces of the fibrous mat (2) substantially comprises a cashew nut shell resin, and the second degradable resin (4) impregnating the structure of the fibrous mat (2) substantially comprises either polyvinyl alcohol or poly (tetramethylene adipate-co-terephthalate).

17. A tree shelter (1) as claimed in any of Claims 1 to 16, comprising at least one biodegradable stake (9) made from the same fibres as the fibrous mat (2) and a degradable resin.

18. A tree shelter (1) as claimed in any of Claims 1 to 17, comprising a stake (9) which is passed through slits (10) provided in the fibrous mat to retain the shelter (1) in a rolled state when in use.

19. A tree shelter (1) as claimed in any of Claims 1 to 18, wherein the fibrous mat (2) is impregnated with a slow- release fertilizer and/or a weed suppressing preparation.

20. The use of a tree shelter (1) as claimed in any of Claims 1 to 19.

21. A method of making a tree shelter (1) comprising the steps of: manufacturing a fibrous mat (2) from biodegradable fibres; covering the sides of the mat (2) with a degradable resin (5); and cutting the resin-covered mat (2) into a panel (6) which is adapted to be formed into a self-supporting roll that can enclose at least the lower part of a plant.

22. A method as claimed in Claim 21, wherein the fibrous mat (2) is manufactured by carding biodegradable fibres into a loose layer; stacking a plurality of the carded fibre layers over one another ; and needle-punching the stacked layers to cross-link them to form the mat (2).

23. A method as claimed in Claim 21 or Claim 22, comprising the additional steps of mixing a second degradable resin (4) in powdered or granular form with the biodegradable fibres (3) prior to manufacture of the mat and of curing the second resin (4) by heating the mat (2) after manufacture and prior to covering by the first degradable resin (5).

24. A method as claimed in Claim 23, wherein the first and second resins (4,5) are both biodegradable and the rate of degradation of the first resin (5) is longer than the rate of degradation of the second resin (4).

25. A method as claimed in Claim 21, wherein the fibrous mat (2) comprises a woven mat made from biodegradable yarn.

26. A method as claimed in any of Claims 21 to 25, wherein prior to covering the sides of the mat (2) with the first resin (5), the mat (2) is impregnated with a slow-release fertilizer and/or a weed suppressing preparation.

27. A method as claimed in any of Claims 21 to 26, wherein the sides of the mat (2) are covered with the degradable first resin (5) by laying pre-formed sheets of the resin (5) over the opposing sides of the mat (2) and laminating the resin sheets (5) and the mat (2) together by the application of heat and pressure.

28. A method as claimed in any of Claims 21 to 26, wherein the first resin (5) is extruding in a sheet form directly over each side of the mat (2) and then cured.

29. A method as claimed in any of Claims 21 to 26, wherein the first resin (5) is rolled or brushed in a liquid form directly over each side of the mat (2) and then cured.

30. A method as claimed in any of Claims 21 to 29, comprising the further step of cutting the resin-covered mat (2) into a substantially rectangular panel (6) along one edge of which is formed at least one projecting tab (7) that can be inserted into a slit (8) cut close to an opposing edge of the panel to enable the rectangular panel (6) to be formed into a self-supporting roll.

31. A method as claimed in any of Claims 21 to 30, comprising the further step of securing at least one stake (7) to the panel (4).

32. A method as claimed in any of Claims 21 to 29, comprising the further step of cutting the resin-covered mat (2) into a substantially rectangular panel (6) along two opposing edges of which a series of slits (10) are cut and through which a stake (9) can be inserted after the panel (6) has been formed into a roll in order to retain the shelter (1) in a rolled state.